UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,615	12/02/2005	Youichi Nanba	Q76011	1679

23373 7590 04/20/2011
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
CHUO, TONY SHENG HSIANG	
ART UNIT	PAPER NUMBER
1729	

NOTIFICATION DATE	DELIVERY MODE
04/20/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
PPROCESSING@SUGHRUE.COM
USPTO@SUGHRUE.COM

Response to Amendment

1. The addition of the limitation "and which has a substantially uniform structure from the surface to the center portion of the particle" to claim 1 changes the scope of the claims. Therefore, the proposed amendment raises new issues that would require further search and/or consideration.

Response to Arguments

2. The applicants argue that there are two types of natural graphite. The natural graphite in Example 2 comprises amorphous structure regions which were generated by being subjected to mechanical stress at the time of granulating. The natural graphite disclosed in Example 1 of Sudo et al is massive (lump- shaped) natural graphite.

In response, this argument is not commensurate with the scope of the claims. There is no limitation in the claims that require a granulated natural graphite comprising amorphous structure regions. Therefore, the claims still read on amorphous regions that are formed by the raw material of a polymer that permeates into the natural graphite particles.

The applicants further argue that there is evidence to show that in Sudo et al phenol resin does not permeate into natural graphite particles. Example 1 of the present specification employs a method of mixing carbon and resin materials and then polymerizing the mixture. On the other hand, Sudo et al employ a method of mixing a polymer as it is into carbon. Since the resin material used in the present invention is not a polymer and has very low viscosity, it readily permeates into little cracks and voids in

the carbon particles. On the other hand, the polymer of Sudo et al has high viscosity and has difficulty in permeating into the carbon particles, though the polymer may attach onto the carbon surface. Accordingly, one of ordinary skill in the art would readily understand that the phenol resin of Sudo et al does not permeate into the natural graphite particles in Sudo et al.

In response, the examiner disagrees that Sudo et al discloses a method of mixing a polymer as it is into the carbon. Firstly, Sudo et al discloses a step of curing (polymerization) of the phenol resin by heating at a higher temperature after mixing with the carbon particles (pg. 25, lines 22-31). This implies that the phenol resin is not a polymer before it is mixed with the carbon particles. Further, the applicants have not pointed out where Sudo et al discloses a polymer that has high viscosity. The examiner further points out that Sudo et al discloses "In order to reduce the viscosity of the aforementioned mixture ... the composition is diluted with a solvent" (pg. 25, lines 4-6). This further supports the examiner's position that the Sudo phenol resin does not have high viscosity. Therefore, one of ordinary skill in the art would understand that the phenol resin of Sudo et al inherently permeates into the natural graphite particles because it has low viscosity from being diluted with a solvent.

TC